



DEPARTMENT OF APPLIED MATHEMATICS

應 用 數 學 系

**The Hong Kong Polytechnic University
Department of Applied Mathematics**

Colloquium

**Joint analysis of panel count data with an informative
observation process and a dependent terminal event**

by

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Abstract

Panel count data occur in many clinical and observational studies, and in many situations, the observation process may be informative and also there may exist a terminal event such as death which stops the follow-up. In this article, we propose a new joint model for the analysis of panel count data in the presence of both an informative observation process and a dependent terminal event via two latent variables. For the inference on the proposed models, a class of estimating equations is developed and the resulting estimators are shown to be consistent and asymptotically normal. In addition, a lack-of-fit test is provided for assessing the adequacy of the models. Simulation studies suggest that the proposed approach works well for practical situations. A real example from a bladder cancer clinical trial is used to illustrate the proposed methods.

Date : 15 August 2016 (Monday)

Time : 3:00p.m. – 4:00p.m.

Venue : TU801, The Hong Kong Polytechnic University

***** ALL ARE WELCOME *****